IN THE CLAIMS:

Please amend the claims as follows:

Claim 1 (Previously Presented): Tool for cutting materials comprising:

a rotatable body with a rotation axis and cutting edges for cutting the material during movement of the body in a first direction parallel to the rotation axis,

wherein the cutting edges comprise inner cutting edges laying on a first surface of revolution which is in the first direction higher at a larger diameter and lower at a smaller diameter,

wherein at a diameter larger than the inner cutting edges outer cutting edges are laying on a second surface of revolution which is in the first direction lower at a larger diameter and higher at a smaller diameter, and

wherein a cone angle $\alpha 1$ is larger than 65°.

Claim 2 (Canceled).

Claim 3 (Previously Presented): Tool according to claim 1, wherein the inner cutting edge extends essentially to the center of the tool.

Claim 4 (Previously Presented): Tool according to claim 1, wherein the outer edge extends substantially to the outer diameter of the tool.

Claim 5 (Previously Presented): Tool according to claim 1, wherein the first surface and the second surface intersect at a circle and the inner cutting edges and the outer cutting edges extend to this circle.

Claim 6 (Previously Presented): Tool according to claim 5, wherein the circle has a diameter of at least half of the maximum diameter of the outer cutting edges.

Claim 7 (Currently Amended): Tool according to claim 5, wherein the diameter of the circle falls in the range from between 0.5 D and 0.9 D, ~~preferably between 0.6 D and 0.8 D and in particular between 0.74 D and 0.78 D,~~ wherein D is the diameter of the tool.

Claim 8 (Previously Presented): Tool according to claim 1, wherein the first surface and/or the second surface are a cone.

Claim 9 (Currently Amended): Tool according to claim 8, wherein the cone angles ($\alpha 2$,$\alpha 1$) are both larger than 65°~~, preferably larger than 75° and in particular between 77° and 87°, the most preferred angles falling within the range from 79° to 82°~~.

Claim 10 (Previously Presented): Tool according to claim 8, wherein the top angle ($\alpha 2$) of the cone of the first surface and the top angle ($\alpha 1$) of the cone of the second surface are approximately equal.

Claim 11 (Currently Amended): Tool according to claim 1, wherein the transition from the first cutting edge to the second cutting edge occurs along a rounded tip portion having a radius r of curvature from between 0.1 mm and 2 mm~~, preferably 0.2 mm to 0.5 mm~~.

Claim 12 (Previously Presented): Tool according to claim 1, wherein near the cutting edges the rotatable body is provided on its outside circumference with support planes laying in an approximately cylindrical surface being parallel to the rotation axis.

Claim 13 (Previously Presented): Tool according to claim 1, wherein an inner cutting edge and an outer cutting edge form a cutting tooth.

Claim 14 (Previously Presented): Tool according to claim 13, wherein the support planes are located on the cutting teeth.

Claim 15 (Previously Presented): Tool according to claim 13, wherein the tool has at least two and preferably four cutting teeth.

Claim 16 (Previously Presented): Tool according to claim 15, wherein the tips of the different cutting teeth are located on the same circle about the center of the tool.

Claim 17 (Previously Presented): Tool according to claim 1, wherein the tool is provided with a shank for fastening the tool in a clamp of a machine tool, the shank having a

length such that the distance between the clamp and the cutting edges is at least four times the diameter of the cutting edges.

Claim 18 (Previously Presented): Method for machining material using a tool according to claim 1, whereby the tool is rotated and in a first movement moved in the direction of its rotation axis into the material, retracted, moved a step-distance (SD) in a direction perpendicular to its rotation axis and in a next movement moved in the direction of its rotation axis into the material, thereby cutting a sickle-shaped section of material wherein the step-distance (SD) is such that the volume machined by the inner cutting edges from the sickle-shaped section of material is approximately equal to the volume machined by the outer cutting edges.

Claim 19 (Previously Presented): Method for machining material using a tool according to claim 1, whereby the tool is rotated and in a first movement moved in the direction of its rotation axis into the material, retracted, moved a step-distance (SD) in a direction perpendicular to its rotation axis and in a next movement moved in the direction of its rotation axis into the material, thereby cutting a sickle-shaped section of material wherein the step-distance (SD) is such that any moment at least two inner cutting edges are cutting the sickle-shaped section of material.

Claim 20 (Previously Presented): Tool according to claim 4, wherein the outer cutting edge is rounded at the outer diameter of the tool with a radius of curvature between 1/5 and 1/20 of the outer diameter.

Claim 21 (New): Tool according to claim 7, wherein the diameter of the circle falls in the range from between 0.6 D and 0.8 D.

Claim 22 (New): Tool according to claim 21, wherein the diameter of the circle falls in the range from between 0.74 D and 0.78 D.

Claim 23 (New): Tool according to claim 9, wherein the cone angles ($\alpha 2$,$\alpha 1$) are both larger than 75°.

Claim 24 (New): Tool according to claim 23, wherein the cone angles ($\alpha 2$,$\alpha 1$) are both between 75° and 87°.

Claim 25 (New): Tool according to claim 24, wherein the cone angles ($\alpha 2$,$\alpha 1$) are both within the range from 77° to 87°.

Claim 26 (New): Tool according to claim 24, wherein the cone angles ($\alpha 2$,$\alpha 1$) are both within the range from 79° to 82°.

Claim 27 (New): Tool according to claim 11, wherein the radius of curvature is from between 0.2 mm to 0.5 mm.